



DHV TESTREPORT LTF 2009

GIN GTO 2 M

Type designation GIN GTO 2 M
Type test reference no DHV GS-01-2124-15
Holder of certification [GIN Gliders Inc.](#)
Manufacturer [GIN Gliders Inc.](#)
Classification D
Winch towing Yes
Number of seats min / max 1 / 1
Accelerator Yes
Trimmers No



BEHAVIOUR AT MIN WEIGHT IN FLIGHT (90KG)

Test pilots



Harald Buntz

BEHAVIOUR AT MAX WEIGHT IN FLIGHT (105KG)



Sebastian Mackrodt

Inflation/take-off	A	A
Rising behaviour	Smooth, easy and constant rising	Smooth, easy and constant rising
Special take off technique required	No	No
Landing	A	A
Special landing technique required	No	No
Speeds in straight flight	A	A
Trim speed more than 30 km/h	Yes	Yes
Speed range using the controls larger than 10 km/h	Yes	Yes
Minimum speed	Less than 25 km/h	Less than 25 km/h
Control movement	A	C
Symmetric control pressure	Increasing	Increasing
Symmetric control travel	Greater than 60 cm	50 cm to 65 cm
Pitch stability exiting accelerated flight	A	A
Dive forward angle on exit	Dive forward less than 30°	Dive forward less than 30°
Collapse occurs	No	No
Pitch stability operating controls during accelerated flight	A	A
Collapse occurs	No	No
Roll stability and damping	A	A
Oscillations	Reducing	Reducing
Stability in gentle spirals	A	A
Tendency to return to straight flight	Spontaneous exit	Spontaneous exit
Behaviour in a steeply banked turn ⚠	B	B
Sink rate after two turns	More than 14 m/s	More than 14 m/s
Symmetric front collapse	C	C
Entry	Rocking back greater than 45°	Rocking back greater than 45°
Recovery	Spontaneous in 3 s to 5 s	Spontaneous in 3 s to 5 s

Dive forward angle on exit	Dive forward 30° to 60°	Dive forward 30° to 60°
Change of course	Entering a turn of less than 90°	Entering a turn of less than 90°
Cascade occurs	No	No

Symmetric front collapse in accelerated flight	C	C
Entry	Rocking back greater than 45°	Rocking back greater than 45°
Recovery	Spontaneous in 3 s to 5 s	Spontaneous in 3 s to 5 s
Dive forward angle on exit	Dive forward 30° to 60°	Dive forward 30° to 60°
Change of course	Entering a turn of less than 90°	Entering a turn of less than 90°
Cascade occurs	No	No

Exiting deep stall (parachutal stall)	B	B
Deep stall achieved	Yes	Yes
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Dive forward angle on exit	Dive forward 30° to 60°	Dive forward 30° to 60°
Change of course	Changing course less than 45°	Changing course less than 45°
Cascade occurs	No	No

High angle of attack recovery	A	A
Recovery	Spontaneous in less than 3 s	Spontaneous in less than 3 s
Cascade occurs	No	No

Recovery from a developed full stall	B	B
Dive forward angle on exit	Dive forward 30° to 60°	Dive forward 30° to 60°
Collapse	No collapse	No collapse
Cascade occurs (other than collapses)	No	No
Rocking back	Greater than 45°	Greater than 45°
Line tension	Most lines tight	Most lines tight

Asymmetric collapse 45-50%	A	A
Change of course until re-inflation	Less than 90°	Less than 90°
Maximum dive forward or roll angle	Dive or roll angle 15° to 45°	Dive or roll angle 15° to 45°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	No	No
Twist occurs	No	No
Cascade occurs	No	No

Asymmetric collapse 70-75%	C	C
Change of course until re-inflation	90° to 180°	90° to 180°
Maximum dive forward or roll angle	Dive or roll angle 45° to 60°	Dive or roll angle 45° to 60°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	No	No
Twist occurs	No	No
Cascade occurs	No	No

Asymmetric collapse 45-50% in accelerated flight	C	C
Change of course until re-inflation	Less than 90°	Less than 90°
Maximum dive forward or roll angle	Dive or roll angle 45° to 60°	Dive or roll angle 45° to 60°
Re-inflation behaviour	Spontaneous re-inflation	Spontaneous re-inflation
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	No	No
Twist occurs	No	No
Cascade occurs	No	No

Asymmetric collapse 70-75% in accelerated flight	C	D
Change of course until re-inflation	90° to 180°	90° to 180°
Maximum dive forward or roll angle	Dive or roll angle 45° to 60°	Dive or roll angle 60° to 90°
Re-inflation behaviour	Spontaneous re-inflation	Inflates in less than 3 s from start of pilot action
Total change of course	Less than 360°	Less than 360°
Collapse on the opposite side occurs	Yes, no turn reversal	Yes, causing turn reversal
Twist occurs	No	No
Cascade occurs	No	No

Directional control with a maintained asymmetric collapse	C	C
Able to keep course	Yes	Yes
180° turn away from the collapsed side possible in 10 s	Yes	Yes
Amount of control range between turn and stall or spin	25 % to 50 % of the symmetric control travel	25 % to 50 % of the symmetric control travel

Trim speed spin tendency	A	A
Spin occurs	No	No

Low speed spin tendency	A	A
Spin occurs	No	No

Recovery from a developed spin	C	C
Spin rotation angle after release	Stops spinning in 90° to 180°	Stops spinning in 90° to 180°

Cascade occurs No

No

B-line stall

C

D

Change of course before release Changing course less than 45°

Changing course more than 45°

Behaviour before release Remains stable without straight span

Unstable

Recovery Spontaneous in 3 s to 5 s

Recovery through pilot action in less than a further 3 s

Dive forward angle on exit Dive forward 0° to 30°

Dive forward 0° to 30°

Cascade occurs No

No

Big ears

B

B

Entry procedure Dedicated controls

Dedicated controls

Behaviour during big ears Stable flight

Stable flight

Recovery Spontaneous in 3 s to 5 s

Spontaneous in 3 s to 5 s

Dive forward angle on exit Dive forward 0° to 30°

Dive forward 0° to 30°

Big ears in accelerated flight

A

A

Entry procedure Standard technique

Dedicated controls

Behaviour during big ears Stable flight

Stable flight

Recovery Spontaneous in 3 s to 5 s

Spontaneous in 3 s to 5 s

Dive forward angle on exit Dive forward 0° to 30°

Dive forward 0° to 30°

Behaviour immediately after releasing the accelerator while maintaining big ears Stable flight

Stable flight

Behaviour exiting a steep spiral

A

A

Tendency to return to straight flight Spontaneous exit

Spontaneous exit

Turn angle to recover normal flight Less than 720°, spontaneous recovery

Less than 720°, spontaneous recovery

Sink rate when evaluating spiral stability [m/s] 14

14

Alternative means of directional control

A

A

180° turn achievable in 20 s Yes

Yes

Stall or spin occurs No

No

Any other flight procedure and/or configuration described in the user's manual

No other flight procedure or configuration described in the user's manual